LISTING OF THE CLAIMS:

1-25. (canceled)

26. (currently amended) A composition comprising a dendrimer, said dendrimer comprising [[an]] a partially acetylated generation 5 (G5) polyamideamine (PAMAM) or polypropylamine (POPAM) dendrimer wherein greater than 80% of the primary amino groups of said dendrimer are acetylated, said partially acetylated dendrimer comprising one or more functional groups, wherein at least one of said functional groups comprises a therapeutic agent, wherein said partially acetylated dendrimer comprising one or more functional groups is obtained by the process comprising:

a) providing a G5 PAMAM or POPAM dendrimer;

b) reacting said dendrimer with acetic anhydride under conditions such that greater than 80% of the primary amino groups of said dendrimer are acetylated; and

c) functionalizing said partially acetylated dendrimer via conjugating one or more functional groups to the partially acetylated dendrimer.

27. (previously presented) The composition of Claim 26, wherein said one or more functional groups are selected from the group consisting of a therapeutic agent, a targeting agent, an imaging agent, or a biological monitoring agent.

28. (previously presented) The composition of Claim 26, wherein said acetylated G5 dendrimer is conjugated to said functional group.

29. (previously presented) The composition of Claim 26, wherein said therapeutic agent comprises a chemotherapeutic agent.

30. (previously presented) The composition of Claim 26, wherein said therapeutic agent is protected with a protecting group selected from photo-labile, radio-labile, and enzyme labile protecting groups.

31. (previously presented) The composition of Claim 29, wherein said chemotherapeutic agent is selected from platinum complex, verapamil, podophyllotoxin, carboplatin, procarbazine, mechlorethamine, cyclophosphamide, camptothecin, ifosfamide, melphalan, chlorambucil, bisulfan, nitrosurea, adriamycin, dactinomycin, daunorubicin, doxorubicin, bleomycin, plicomycin, mitomycin, etoposide, tamoxifen, taxol, transplatinum, 5-fluorouracil, vincristin, vinblastin, and methotrexate.

32. (previously presented) The composition of Claim 29, wherein said platinum complex comprises cisplatin.

33. (previously presented) The composition of Claim 27, wherein said targeting agent is an antibody.

34. (previously presented) The composition of Claim 27, wherein said targeting agent is a receptor ligand.

35. (previously presented) The composition of Claim 27, wherein said targeting agent is folic acid.

36. (previously presented) The composition of Claim 27, wherein said imaging agent comprises a fluorescent agent.

37. (previously presented) The composition of Claim 36, wherein said fluorescent agent is fluorescein isothiocyanate.

38. (previously presented) The composition of Claim 27, wherein said monitoring agent is capable of measuring an amount of apoptosis caused by said therapeutic agent.

39. (previously presented) The composition of Claim 26, further comprising a second dendrimer conjugated to said acetylated dendrimer.

40. (previously presented) The composition of Claim 39, wherein said second dendrimer is conjugated to said acetylated dendrimer via a covalent bond.

41. (previously presented) The composition of Claim 39, wherein said second dendrimer is conjugated to said acetylated dendrimer via hybridization of nucleic acid linkers attached to each of said second dendrimer and said acetylated dendrimer.

42. (previously presented) The composition of Claim 41, wherein a duplex formed from hybridization of said linkers comprises a cleavage site.

43. (previously presented) The composition of Claim 42, wherein said cleavage site comprises a nuclease recognition site.

44. (previously presented) The composition of Claim 43, wherein said nuclease recognition site comprises a restriction endonuclease recognition site.

45. (previously presented) The composition of Claim 39, wherein said second dendrimer comprises an acetylated generation 5 (G5) polyamideamine (PAMAM) or polypropylamine (POPAM) dendrimer.

46. (previously presented) The composition of Claim 39, wherein said second dendrimer comprises one or more functional groups selected from the group consisting of a therapeutic agent, a targeting agent, an imaging agent, or a biological monitoring agent.

47-52. (cancelled)